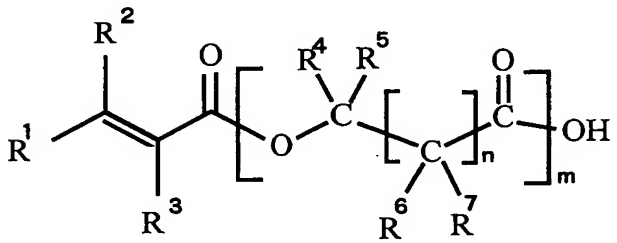
CLAIMS

1. A method for producing an unsaturated lactone-derived polyester monomer of Structural Formula (1):



(1)

wherein each of R^1, R^2, R^3, R^4, R^5, R^6, and R^7 represents a substituent selected from the group consisting of hydrogen atom, a substituted or unsubstituted alkyl group having one to ten carbon atoms, a substituted or unsubstituted aryl group, a substituted or unsubstituted alkoxycarbonyl group, a substituted or unsubstituted alkoxy group, a substituted or unsubstituted aryloxy group, and a halogen atom, wherein R^1, R^2, R^3, R^4, R^5, R^6, and R^7 may be combined to form one or more rings; n denotes an integer from 1 to 7; and m denotes an integer from 1 to 100, the method comprising the steps of reacting a carboxyl-containing radically polymerizable unsaturated monomer with a cyclic lactone by the catalysis of an acidic catalyst in the presence of 1 to 50 parts by weight of water to 100 parts by weight of the total of the carboxyl-containing radically polymerizable unsaturated monomer and the cyclic lactone; and carrying out dehydration under reduced pressure for removing low boiling

components to form an ester bond between a by-produced water-initiated lactone oligomer and the carboxyl-containing radically polymerizable unsaturated monomer to thereby reduce a hydroxyl value to 5.0 mg of KOH per gram or less.

2. The method for producing an unsaturated lactone-derived polyester monomer according to claim 1, wherein the carboxyl-containing radically polymerizable unsaturated monomer is at least one selected from the group consisting of acrylic acid, methacrylic acid, maleic acid, and itaconic acid.

3. The method for producing an unsaturated lactone-derived polyester monomer according to one of claims 1 and 2, wherein the cyclic lactone is at least one selected from the group consisting of ε-caprolactone, trimethyl-ε-caprolactone, monomethyl-ε-caprolactone, γ-butyrolactone, γ-valerolactone, and δ-valerolactone.

4. The method for producing an unsaturated lactone-derived polyester monomer according to any one of claims 1 to 3, further comprising carrying out dehydration under reduced pressure for removing low boiling components in the presence of residual carboxyl-containing radically polymerizable unsaturated monomer to form an ester bond between the carboxyl-containing radically polymerizable unsaturated monomer and the water-initiated lactone oligomer as a by-produced to thereby reduce the hydroxyl value to 5.0 mg of KOH per gram or less.